Photo: Adrian Reynolds / Shutterstock.com

Getting out of a jam

Darryll Finch argues that the smarter use of telematics data can help reduce cargo theft, bring much-needed clarity to freight crime figures, and ease road congestion into the bargain

The logistics industry is the fifth largest in UK, employing 1.8 million people and contributing £78bn to the economy, yet it is under growing threat from congestion and cargo theft.[1] Congestion costs the UK economy £31 billion a year[2], paralysing vital supply chains, while Britain has recently seen a 98.8% climb in cargo crime[3] with theft from vehicles accounting for a major proportion. In Q3 2016 alone, an average of five freight thefts a day were recorded across EMEA, a 105% increase on the previous year. The most frequent targets[4] included pharmaceuticals, clothing & footwear, computers and laptops.

Even worse, these crime figures may mask the true scale of the problem as truck crime is not identified separately on the Police National Computer; there is no single classification for categories of truck crime, and no requirement for the entry of crime details across local police forces.[5] Many vehicles and hauliers do not have the technical capacity for quick-time reporting of theft, nor the ability to record how and where a vehicle was stolen or by whom.

This enables some drivers to secretly collaborate in the thefts by pulling over in isolated locations and allowing thieves to unload cargo, safe in the knowledge that the haulier or police will have no way of finding out.[6]

Smart telematics

It is well-known that vehicle telematics data can improve detection and location of potential maintenance problems and guide drivers to repair services. What is rarely understood is that telematics data also offers a new way to liberate the road haulage industry from congestion and cargo crime.

Data analytics is now able to pull such a rich abundance of real-time telematics data from vehicle components that it can remotely notify a fleet manager in real-time if a particular door has been opened, indicating possible theft. This can be linked with GPS data to identify the precise time and location of the incident.

Telematics systems can even be linked with inward and outward-facing cameras on vehicles to record the license plates or identities of the perpetrators. Crucially, panic buttons can be integrated into vehicles so drivers can remotely alert central control rooms of any instances where they are at risk of theft, recording exactly where the cargo was stolen from.

Deterrent

Matching data collected from vehicle systems and components with GPS location data could also enable freight firms to detect trends that indicate driver fraud, e.g., when vehicles have stopped for too long or in the wrong location. This helps deter any drivers from collaborating with cargo thieves by identifying suspicious patterns of behavior indicative of fraud such as lengthy stop-overs in remote spots.

Crucially, this technology can also improve the credibility and accuracy of road crime data, which is vital to combat fraud, recover stolen cargo and track down perpetrators. TruckWatch, which monitors UK road freight crime, says it relies entirely on "a word of mouth communication process"[7] to report truck crime. It argues that the incorporation of modern telematics software and intelligent transport systems would give its findings far greater credibility.

It would allow hauliers and law enforcement to centrally collect reliable, real-time data on the frequency and location of freight crime, along with evidence to support prosecutions.

If truck crime was consistently recorded electronically and the police created a separate database category for truck crime, it could create a detailed pool of highly accurate data on freight crime enabling police to identify the major hotspots and the types of vehicles and cargo being targeted.

Proactive crime prevention

Matching GPS location data with real-time local traffic and hazard data could also create 'intelligent' freight fleets that proactively avoid cargo crime and congestion based on real-time data.

Since most freight crime tends to be concentrated in specific 'hotspots' which can change from month-to-month, security depends on companies helping drivers to avoid the sites of recent thefts or hijackings. Real-time route-optimisation technology is now enabling hauliers to match live geolocation and telematics data from their truck fleets with up to-the-minute local crime, traffic and weather data enabling them to re-route driver around new traffic or crime hotspots.

This can enable trucks to receive hazard alerts tailored to the individual speed and location of their vehicle, creating intelligent adaptive freight supply chains that continuously predict and prevent traffic bottlenecks and crimes before they happen.

Evidence trail

It is vital that freight operators and police forces exploit the vast amount of data in modern vehicles to help shine a light on the causes of road freight crime and congestion. This also means that police and crime victims no longer have to rely on inconsistent oral or written evidence but instead have a forensic electronic evidence trail of road freight theft or accidents.

'Joining up' vehicle data with data from highways agencies, police forces, local authorities and road repair services allows freight fleets to proactively avoid crime or congestion. Ultimately it could create data-driven 'smart' cities where vehicle location and telematics data is shared with everything from traffic lights to highways agencies so breakdown services or transport police are always in the right place at the right time and crime, accidents or congestion is predicted and prevented

With advanced plug-and-play telematics solutions such as those provided by Geotab, vehicles send data from a multitude of sources, including the engine, the drivetrain, the instrument cluster and other subsystems over modem links to the MyGeotab web-based fleet management software. And by using the latest RFID technology and an NFC fob, operators can quickly, easily, and securely review individual driver trips and driving behaviour. Image Geotab Inc.

A new drive to educate lorry drivers about the dangers of thefts was launched in May by Northamptonshire Police working closely with the Road Haulage Association, motorway service station providers, the National Vehicle Crime Intelligence Service (NaVCIS) and neighbouring forces that form the East Midlands Operational Support Service (EMOpPS). Photo: Northamptonshire Police

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